



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,541	07/16/2003	John Campbell	13867.25USUI	8442
23552	7590	09/26/2005	EXAMINER	
MERCHANT & GOULD PC			RIVELL, JOHN A	
P.O. BOX 2903				
MINNEAPOLIS, MN 55402-0903			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,541	CAMPBELL, JOHN	
	Examiner John Rivell	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 7/16/03 (application).  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-16 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 16 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some.\* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date 01092004.

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

Claims 1-16 are objected to because of the following informalities: In all claims, exception is taken concerning the recitation "tamper switch mounted (directly) on the stem..." While it is understood that, as disclosed throughout the specification, the switch mechanism is attached to the valve body 15, at 15a and specifically at page 8, line 20+ that the "switch 90 is mounted to... the stem 18", from a technical standpoint having switch mechanism "mounted to the stem 18" appears to be inaccurate in that, the switch mechanism depends on relative movement between itself and the valve stem 18 to cause reciprocation of "actuator" 92 to actuate the switch. If the switch is mounted, connected attached, etc. to the "stem 18" no such relative movement appears possible.

Additionally, exception is taken concerning the actuator element 92 being made of "compressible material". While it is noted that page 11, lines 10-12 explicitly describes the actuator 92 to be of "elastomeric material", the actuator has to transfer motion from one element to another. If the actuator itself merely compresses upon force application, no motion is transferred to the switch to actuate the switch.

In the action to follow, the claims are interpreted as if the switch mechanism is attached to or supported by the valve body 15, at 15a as shown in figures 2A and 2B, so that relative movement between the stem and the switch produces movement to actuate the switch 90 as disclosed. Also, in light of the majority of the specification describing the actuator 92 as being physically reciprocated upon valve stem motion, claim 10 below will be treated as such.

Appropriate correction is required if necessary.

Art Unit: 3753

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9-10 and 11-16 are rejected under 35 U.S.C. §102 (b) as being anticipated by Gardner.

The patent to Gardner discloses a “pressure reducing valve, comprising: a valve (1) including a housing having an inlet and an outlet defining a flow passage therethrough and a flow actuating mechanism (at screw valve stem 2) connected to said housing, said flow actuating mechanism including a stem (2) in communication with said inlet and outlet, said stem being rotatably connected to said housing and being at least partially rotatably insertable in said housing, said stem is operable for actuating the valve in an open state or in a closed state according to an inserted position of the stem (2); a tamper switch mechanism (within housing 12, 21 at contacts 16 and 20) mounted on said stem (i.e. mounted on the valve body at yoke 5), said tamper switch mechanism including an actuator (plunger 8) contactable (via reduced end 9) with said stem (2) such that said tamper switch mechanism being actuatable according to said inserted position of said stem (2), wherein said tamper switch mechanism enables said valve to be monitored in the open state and the closed state” as recited in claim 1.

Regarding claim 2, in Gardner, “said stem (2) and actuator (8) including a contact (e.g. the switch contacts are in contact when the valve is open)/non-contact relationship

Art Unit: 3753

(e.g. the switch contacts are not in contact when the valve is closed) when said stem is rotated into and out said housing" to open and close the valve as recited.

Regarding claim 3, in Gardner, "contact/non-contact relationship including said actuator (8) contacting said larger width (the outside of the stem outside of the threads when the reduced portion 6 of the stem 2 is not in alignment with the plunger 8) of said stem when said valve is in said open state, and not (in compressed contact as disclosed at page 9) said smaller width (6 of the stem) when said valve is in said closed state" as recited.

Regarding claim 4, in Gardner, "said contact/non-contact relationship being a compressed/non-compressed engagement such that said actuator (8) compressibly engages with said stem (2) when the valve is in the open state and (compressibly) disengages from said stem (2) when the valve is in the closed state" as disclosed in Gardner at page 1, line 100 through page 2, line 18.

Regarding claim 5, in Gardner, "said stem (2) is rotatably insertable a distance into and out of said valve (1) to operate said valve in said open and closed states" as recited.

Regarding claim 9, in Gardner, "said actuator (8) is a pin or bar that is compressibly engageable with said stem (2) via spring 13, as recited.

Regarding claim 10, in Gardner, "the actuator pin (8) is an elastomeric material" (as understood relative to the above). That is, the actuator is biased by spring 13 into contact with the stem 2.

Regarding claim 11, in Gardner, "said flow actuating mechanism further comprising a handwheel (3) disposed at a top of said stem (2), said tamper switch

mechanism being mounted on said stem (i.e. mounted on the valve body via yoke 5) and between said handwheel (3) and said housing" as recited.

Regarding claim 12, in Gardner, "said tamper switch mechanism being constructed and arranged such that said tamper switch mechanism is contained within a clearance space of said handwheel (3) and said housing" as recited.

Regarding claim 13, in Gardner, "said tamper switch mechanism including switch components (contacts 16, 20) operatively connected with said actuator (8), said actuator (8) being operable for creating or breaking a signal (e.g. an alarm circuit) within said switch components according to said inserted position of said stem to indicate an operating condition of said valve" as recited.

Regarding claim 14, in Gardner "said tamper switch mechanism further comprising an audible device (e.g. an alarm) so as to indicate an operating condition of said valve" as recited.

Regarding claim 15, Gardner discloses a "fluid delivery system, comprising: a fluid delivery line (the valve 1 outlet) connected to a fluid source (the valve 1 inlet); and a pressure reducing valve (1) adaptable with said fluid delivery line to receive an inlet pressure from said fluid delivery line and control an outlet pressure exiting said pressure reducing valve (based on the relative position of the valve 1 head relative to the valve 1 seat); said pressure reducing valve (1) including a housing having an inlet and an outlet defining a flow passage therethrough and a flow actuating mechanism (stem 2 and handwheel 3) connected to said housing, said flow actuating mechanism including a stem (2) in communication with said inlet and outlet, said stem (2) being rotatably connected to said housing and being at least partially rotatably insertable in said

housing, said stem (2) is operable for actuating the valve (1) in an open state or in a closed state according to an inserted position of the stem (2); a tamper switch mechanism (within housing 12, 21) mounted directly on said stem (i.e. mounted directly in the valve body via yoke 5), said tamper switch mechanism including an actuator (8) contactable with said stem (2) such that said tamper switch mechanism being actuatable according to said inserted position of said stem (2), wherein said tamper switch mechanism enables said pressure reducing valve to be monitored in the open state and the closed state" as recited.

Regarding claim 16, when making and/or using the device of Gardner, one necessarily performs a "method of monitoring tampering of a pressure reducing valve (1) in a fluid delivery system, comprising: providing a pressure reducing valve (1) adaptable for connection with a fluid delivery line in said fluid delivery system to receive an inlet pressure from said fluid delivery line (via the valve 1 inlet) and control (based on the relative position of the valve 1 head relative to the valve 1 seat) an outlet pressure exiting said pressure reducing valve (1), said pressure reducing valve (1) including an inlet and an outlet defining a flow passage therethrough and a flow actuating mechanism (stem 2 and handwheel 3), said flow actuating mechanism including a stem (2), said stem (2) being at least partially rotatably insertable into said housing to control said pressure reducing valve in an open state or in a closed state according to an inserted position of said stem (2); mounting a tamper switch mechanism (within housing 12, 21) on said stem (i.e. mounted on the valve body), said tamper switch mechanism being actuatable according to said inserted position of said stem (8), actuating said tamper switch mechanism; and monitoring said pressure reducing valve (1) wherein

said tamper switch mechanism indicates an operating condition of said pressure reducing valve in the open state and in the closed state" as recited.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardner.

The patent to Gardner discloses the claimed features with the exception of having the distance the stem moves between open and closed position be "about 1/16 inches into or out of said housing" (claim 6) and "corresponding with two clockwise or counterclockwise turns of said stem" (claim 7).

However, to limit the stroke of the valve stem 2 of Gardner to a value, between open and closed positions, of "about 1/16 inches into or out of said housing" and "corresponding with two clockwise or counterclockwise turns of said stem" is considered to be an obvious design expedient over these features as disclosed in Gardner relating to the pitch and number of treads on the valve stem to perform a full valve stroke which provide no new and/or unexpected results nor solves any stated problem.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gardner in view of Jeschke.

The patent to Gardner discloses all the claimed features with the exception of having "said stem including a tapered portion disposed thereon, said tapered portion defining a larger width proximate said housing and a smaller width proximate a top of said stem".

The patent to Jeschke discloses that it is known in the art to employ a specifically tapered element 4 attached to and moving with a valve stem 6 and cooperating with a biased follower 2 of a position indicating switch mechanism 1 for the purpose of smoothly converting reciprocating motion of a valve stem to perpendicular reciprocating motion of a switch actuating mechanism.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Gardner a tapered element attached to the valve stem 2 for the purpose of smoothly converting reciprocating motion of the valve stem 2 to perpendicular reciprocating motion of the switch actuating mechanism 8 as recognized by Jeschke.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John Rivell  
**Primary Examiner**  
**Art Unit 3753**

j.r.